FORM PTO-1390 (REV. 5-93)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER **2345/171**
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S. APPLICATION NO. (If known, see 37 CFR 1.5) **10/018152**

INTERNATIONAL APPLICATION NO. **PCT/EP00/04523**	INTERNATIONAL FILING DATE **19 May 2000** **(19.05.00)**	PRIORITY DATE CLAIMED: **14 June 1999** **(14.06.99)**

TITLE
CIRCUIT ARRANGEMENT FOR PROVIDING DESKTOP FUNCTIONALITIES FOR TELECOMMUNICATIONS TERMINALS USED IN COMPUTER-AIDED TELECOMMUNICATIONS

APPLICANT(S) FOR DO/EO/US
TRINKEL, Marian; SCHRÖDER, Karsten; MÜLLER, Christel; ZIEM, Thomas; RUNGE, Fred; and ECKERT, Martin

Applicant(s) herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.

2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.

3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) immediately rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).

4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.

5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))

   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).

   b. ☒ has been transmitted by the International Bureau.

   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)

6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).

7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))

   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).

   b. ☐ have been transmitted by the International Bureau.

   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.

   d. ☒ have not been made and will not be made.

8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). (UNSIGNED)

10. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.

13. ☒ A **FIRST** preliminary amendment.

   ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.

14. ☒ A substitute specification and a marked up version of the substitute specification.

15. ☐ A change of power of attorney and/or address letter.

16. ☒ Other items or information: International Search Report, Preliminary Examination Report (translated); and PCT Form 105.

Express Mail No.: EV003628041

U.S. APPLICATION NO. if known, see 37 C.F.R. 1.5 **10/018152**	INTERNATIONAL APPLICATION NO. PCT/EP00/04523	ATTORNEY'S DOCKET NUMBER **2345/171**

17. ☒ The following fees are submitted:

Basic National Fee (37 CFR 1.492(a)(1)-(5)):

Search Report has been prepared by the EPO or JPO $860.00

International preliminary examination fee paid to USPTO (37 CFR 1.482) $710.00

No international preliminary examination fee paid to USPTO (37 CFR 1.482) but
international search fee paid to USPTO (37 CFR 1.445(a)(2)) $740.00

Neither international preliminary examination fee (37 CFR 1.482) nor international
search fee (37 CFR 1.445(a)(2)) paid to USPTO $1,040.00

International preliminary examination fee paid to USPTO (37 CFR 1.482) and all
claims satisfied provisions of PCT Article 33(2)-(4) $100.00

	CALCULATIONS	PTO USE ONLY
ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 860	
Surcharge of $130.00 for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(e)).	$	

Claims	Number Filed	Number Extra	Rate		
Total Claims	6 - 20 =	0	X $18.00	$0	
Independent Claims	1 - 3 =	0	X $84.00	$0	
Multiple dependent claim(s) (if applicable)			+ $280.00	$	

	CALCULATIONS	PTO USE ONLY
TOTAL OF ABOVE CALCULATIONS =	$860	
Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed. (Note 37 CFR 1.9, 1.27, 1.28).	$	
SUBTOTAL =	$860	
Processing fee of $130.00 for furnishing the English translation later the ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f)). +	$	
TOTAL NATIONAL FEE =	$860	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). $40.00 per property +	$	
TOTAL FEES ENCLOSED =	$860	
	Amount to be refunded charged	$ $

a. ☐ A check in the amount of $_____ to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No. __11-0600__ in the amount of $860.00 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. __11-0600__. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

By: [signature]

SIGNATURE

SEND ALL CORRESPONDENCE TO:
Kenyon & Kenyon
One Broadway
New York, New York 10004
Telephone No. (212)425-7200
Facsimile No. (212)425-5288

Richard L. Mayer, Reg. No. 22,490
NAME
12/14/01
DATE

CUSTOMER NO. 26646

FORM PTO-1390 (REV. 5-93)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER **2345/171**

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

10/018152

INTERNATIONAL APPLICATION NO. **PCT/EP00/04523**	INTERNATIONAL FILING DATE **19 May 2000 (19.05.00)**	PRIORITY DATE CLAIMED: **14 June 1999 (14.06.99)**

TITLE
CIRCUIT ARRANGEMENT FOR PROVIDING DESKTOP FUNCTIONALITIES FOR TELECOMMUNICATIONS TERMINALS USED IN COMPUTER-AIDED TELECOMMUNICATIONS

APPLICANT(S) FOR DO/EO/US
TRINKEL, Marian; SCHRÖDER, Karsten; MÜLLER, Christel; ZIEM, Thomas; RUNGE, Fred; and ECKERT, Martin

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8. ☐   A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

9. ☒   An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). (UNSIGNED)

10. ☒   A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

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11. ☒   An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

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15. ☐   A change of power of attorney and/or address letter.

16. ☒   Other items or information: International Search Report, Preliminary Examination Report (translated); and PCT Form 105.

Express Mail No.: EV003628041

NY01 422936 v 1

[2345/171]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Marian TRINKEL et al.
Serial No.	:	To Be Assigned
Filed	:	Herewith
For	:	CIRCUIT ARRANGEMENT FOR PROVIDING DESKTOP FUNCTIONALITIES FOR TELECOMMUNICATIONS TERMINALS USED IN COMPUTER-AIDED TELECOMMUNICATIONS
Art Unit	:	To Be Assigned
Examiner	:	To Be Assigned

Assistant Commissioner
    for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

SIR:

Please amend without prejudice the above-identified application before examination, as set forth below.

IN THE TITLE:

Please replace the title with the following:

--CIRCUIT ARRANGEMENT FOR PROVIDING DESKTOP FUNCTIONALITIES FOR TELECOMMUNICATIONS TERMINALS USED IN COMPUTER-AIDED TELECOMMUNICATIONS--.

EV003628041

IN THE CLAIMS:

Without prejudice, please cancel original claims 1 to 6 in the original application, and please add new claims 7 to 12 as follows:

7. (New) A circuit arrangement to provide a desktop functionality for a telecommunications terminal used in computer-aided telecommunications, comprising:

an intelligent telecommunications system having a connection to a public telephone network and being linked via an integration element, wherein the intelligent telecommunications system includes a computer system, a software layer, and a connection element, the intelligent telecommunications system being connected to a local area network, an electronic data processing system being connected to the local area network,

wherein the local area network is connected to a web server and wherein any access via at least one of a system-bound telephone and an internet telephone is provided with desktop control and status-display functions and call-related data in a dynamic interface of a web browser, any functional scope of the desktop control and status-display functions and the call-related data being provided and an application interface being defined by at least one web document stored on the web server.

8. (New) The circuit arrangement of claim 7 wherein the internet telephone is assigned to the electronic data processing system.

9. (New) The circuit arrangement of claim 7 wherein the internet telephone is assigned to the local area network.

10. (New) The circuit arrangement of claim 7 wherein to provide server-based control and status display and to make available call-related data at the local area network, a server is connected via which the internet telephone connected to at least one of the local area network and the electronic data processing system is controlled, the server connected being designed as an internet-telephone manager.

11. (New) The circuit arrangement of claim 7 wherein for call processing, a gateway element is connected via a trunk circuit to the local area network, the gateway element being

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at least one of an integral component of the intelligent telecommunications system and linked via telephone lines to the intelligent telecommunications system.

12. (New) The circuit arrangement of claim 7 wherein a connection element is located at the local area network, the connection element allowing communication between a user and subscribers outside of the local area network via the internet.

REMARKS

This Preliminary Amendment cancels without prejudice original claims 1 to 6 in the underlying PCT Application No. PCT/EP00/04523, and adds without prejudice new claims 7 to 12. The new claims conform the claims to U.S. Patent and Trademark Office rules and do not add new matter to the application.

The underlying PCT Application No. PCT/EP00/04523 includes an International Search Report, dated September 21, 2000. The Search Report includes a list of documents that were uncovered in the underlying PCT Application. A copy of the Search Report accompanies this Preliminary Amendment.
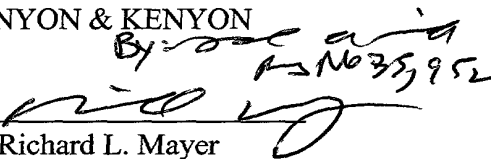
The underlying PCT Application No. PCT/EP00/04523 also includes an International Preliminary Examination Report, dated November 14, 2001, and an annex (including revised pages 2 and 2a, associated with the International Preliminary Examination Report). An English translation of the International Preliminary Examination Report and of the annex accompanies this Preliminary Amendment. The Substitute Specification reflects the revised pages 2 and 2a associated with the International Preliminary Examination Report.

Applicants assert that the subject matter of the present application is new, non-obvious, and useful. Prompt consideration and allowance of the application are respectfully requested.

Respectfully Submitted,

KENYON & KENYON

Dated: _12/14/01_

By: _____
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CUSTOMER NO. 26646

[2345/171]

CIRCUIT ARRANGEMENT FOR PROVIDING DESKTOP FUNCTIONALITIES FOR TELECOMMUNICATIONS TERMINALS USED IN COMPUTER-AIDED TELECOMMUNICATIONS

The present invention is directed to a circuit
arrangement for providing desktop functionalities for
telecommunications terminals used in computer-aided
telecommunications. Telecommunications terminals are
5   understood to include, for example, both telephones at TK
systems, as well as Internet telephones.

From German Patent DE 195 08 076 C2, a circuit
arrangement for integrating a voice system in EDP systems
10   and telephone systems is known, which is linked to the
public telephone network. The basis for this approach is
that the EDP systems and the voice system are linked via
a LAN, with the involvement a LAN server, and via an
integration element, to an intelligent TKA system. In
15   this context, the integration element 7, which includes a
computer system 9, a software layer 10 and an SDLC- or
ISDN-, respectively Euro-ISDN connection element 11, is
configured between the intelligent telecommunications
system/TKA 2 and the EDP System 8. The approach is
20   further characterized in that the voice system includes a
voice medium 12 having a speech memory 13 and a speech
management 14, which is assigned in controllable fashion
by the integration element 7, with the involvement of the
LAN 5 and a file server 6, to the intelligent TKA 2 or to
25   a plurality of intelligent telecommunications systems.
The intelligent TKA 2 directs calls, as needed, to the
voice medium 12, the speech management 14 identifying a
caller via the LAN 5 or, itself, obtaining the
caller-specific identification data using the speech of
30   the speech memory 13, in that, at the same time, the

integration element 7 transfers information, such as the
caller's ultimate destination and the busy condition of
the ultimate destination to the speech management 14, so
as to make available, from the speech memory 13, the
5 speech necessary for communication with the caller.
To make CTI functions available to an operator/user at
his or her electronic data processing system (EDP system
8), in accordance with the above described approach, one
must either install a special CTI application software,
10 such as CSB-ETB (firm CSB System AG, www.csb.de) on the
EDP system 8, or use universal communications
applications, such as MS Outlook, which then need to be
upgraded to include the desired CTI functionality (Office
EDITION, firm Dr. Materna GmbH, www.materna.de). The
15 result, therefore, for all affected users/clients in the
local network is an increased outlay for software
installation and maintenance services. A further drawback
associated with the required special application
approaches is that they are usually equipped with their
20 own address databases, as well as activity journals,
making it necessary for the user to access different data
files for the various forms of communication. In
addition, control and status-display functions of
telephones, which are linked to TK systems, are provided
25 by the EDP system 8, using separate application software,
e.g., CSB-ETB (firm CSB System AG, (www.esb.de). For
Internet telephone functions, a separate software is
likewise used, such as the Internet phone (firm VocalTec
Communications). This further increases the outlay for
30 software installation and maintenance services for all
users/clients in the local network. In addition, the user
is confronted with different operational structures. A
further disadvantage is that additional software is also
required, in turn, for the synchronization of
35 conventional telecommunications and Internet telephony.

To make desktop functionalities available to a user for
his or her telecommunications terminals, one must either
create new applications programs or expand existing
programs to include these functions. Thus, this entails
5   an increased outlay for software installation and
maintenance services for all users in the network. A
further drawback is that some desktop software approaches
do not permit any administration by the user.
The object of the present invention is to provide both
10   the users of system-bound telecommunications terminals,
as well as the users of Internet telephones, with
flexible desktop functionalities, which will avoid the
above-described, related-art disadvantages. In so doing,
the intention is to minimize, in particular, the outlay
15   entailed by the operator/user to install and maintain the
software required for desktop functions.

The approach of the present invention is based on the
basic circuit known from German Patent DE 195 08 076 C2,
20   composed of an intelligent TKA 2, which has a connection
to public telephone network 3 and which is linked to an
integration element 7, composed of a computer system 9, a
software layer 10, and a connection element 11.

25   Integration element 7 is connected to a LAN 5. An EDP
system 8 is connected to LAN 5. Integration element 7 may
be linked both via LAN 5, as well as directly via the
SDLC- or ISDN-, i.e., Euro-ISDN connection element, or
also via other suitable data interfaces to intelligent TK
30   system 2. For telecommunications terminals (telephones),
which are allocated either in cabled or wireless fashion
to a TK system, (intelligent TKA2 and telephone 1), the
present invention provides for a web server 15 to be
connected to LAN 5 to make available control and
35   status-display CTI functions, as well as call-related

data. The CTI control and status-display functions of telecommunications terminals, as well as elements for displaying and inputting call-related data, are made available to the user, via web server 15, in dynamic

5   interfaces of a Web browser. Call-related data are understood to be both general information pertaining to the particular call, such as call numbers or clock times, as well as special information on the people involved, their relationships to one another, and information,

10   which is to be correlated with the call content. This information may be loaded, as needed, from various data files.

The functional scope and the application interface for

15   the CTI functions to be made available to the user, as well as the call-related data, are defined by one or a plurality of Web document(s) stored on Web server 15. Following each process of loading the Web document(s) provided by Web server 15, each user always receives the

20   latest version.

The layout of the interface is automatically adapted to the status, e.g., of telecommunications terminal 1. This means that the information presented to the user and the

25   functions made available to him or her are exclusively those required for the action he or she initiated, i.e., those which are, in fact, useful for the initiated action.

30   Data, such as addresses or activity journal entries from other communications software modules may be read over appropriate interfaces, displayed, and written in there, without the user having to modify his or her corresponding application software.

35

If the user has an Internet telephone, located, for example at LAN 5 or EDP system 8, then the control and status-display functions, as well the call-related data, are made available via Web server 15, for the Internet

5   telephone 18 or 21 in question, in dynamic interfaces of a Web browser.

For the system-bound telecommunications terminals 1, as well as for Internet telephones 18 or 21, the functional

10 scope and the application interface are defined by one or a plurality of Web document(s) stored on the Web server 15. During every loading process, each user always receives the latest version of the Web document.

15 The layout of the interface is configured such that it is always automatically adapted to the status of the particular telephone 1 of intelligent TKA 2 and/or to the status of the particular Internet telephone 18 or 21. This means that the information presented to the user and

20 the functions made available to him or her are exclusively those required or, in fact, useful for the particular action.
Data, such as addresses or activity journal entries from other communications software modules may be read over

25 appropriate interfaces, displayed, and written in there, without the need for modifying the corresponding application software. When a user logs onto the network, a user authentication is expediently carried out, in conjunction with the granting of use rights, before a

30 document is loaded for the first time from Web server 15. This can be done either by way of a password query, or through a smart card belonging to the user.

One further embodiment provides for configuring a server

35 as an Internet-telephone manager 20 at LAN 5.

Internet-telephone manager 20 controls the Internet telephones which are connected to LAN 5 or via EDP system 8, such as Internet telephones 21 and 18, and communicates with EDP system 8. This renders possible a server-based control and status display and/or provision of call-related data.

An Internet connection element (16) is provided at LAN (5) for Internet telephones 18 and 21. Using Internet connection element 16, it is possible to communicate via Internet (17) with subscribers outside of LAN (5) and to enable an Internet access for at least one telecommunications terminal of the user. When system-bound telecommunications terminals are involved, such as telephone 1, remote access from various EDP systems, both at LAN 5, as well as over the entire world, is made possible over an Internet connection via connection element 16.

In the process, the statuses and functions of conventional system-bound telephones 1, which are connected, for example, to intelligent TKA 2, and those of an Internet telephone 18 or 21, are coordinated with one another, depending on the requirements of the user. For examples, functions such as call forwarding, call parking, brokering, call transfer, and teleconferencing may be synchronized and, moreover, also be utilized as directional functions. Thus, if telephone 1 or Internet telephone 18 or 21 is busy, incoming calls at the respective, other telecommunications terminal may be directed to new destinations in accordance with rules established by the user.

Another embodiment of the approach is based on the use of a gateway element 19, which is an integral component of

TK system 2, i.e., is connected via telephone lines to TK system 2. Gateway element 19 is linked via another trunk circuit to LAN 5. The use of a gateway element 19 for coupling different networks (gateway) opens up to the user the possibility of communicating over one single telecommunications terminal, by making proper routing adjustments and, in case of need, e.g., in telephone conferences, of interconnecting calls over various line types.

With respect to the system configuration, there are different design variants. Depending on the user's specific requirements, one may, in some instances, do without a file server 6. Moreover, the functions of file server 6, of integration element 7, of voice medium 12, of Internet connection element 16, as well as of gateway element 19 may be integrated in one single module or be distributed in different useful components among a plurality of modules, depending on the requirements and the handling capacity of these components.

List of Reference Numerals

	1	telecommunications terminal (telephone)
	2	intelligent TKA
5	3	public telephone network
	4	CLI
	5	LAN
	6	file server
	7	integration element
10	8	EDP system
	9	computer system
	10	software layer
	11	connection element
	12	voice medium
15	13	speech memory
	14	speech management
	15	Web server
	16	Internet connection element
	17	Internet
20	18	Internet telephone
	19	gateway element
	20	Internet telephone manager
	21	Internet telephone

25

What is claimed is:

1. A circuit arrangement for providing desktop
   functionalities for telecommunications terminals
   used in computer-aided telecommunications, comprised
   of an intelligent TKA (2), which has a connection to
   the public telephone network (3) and which is linked
   via an integration element (7), made up of computer
   system (9), software layer (10), and connection
   element (11), connected to a LAN (5), an EDP system
   (8) being connected to the LAN (5),
   wherein the LAN (5) is connected to a Web server
   (15), over which the user of at least one
   system-bound telephone (1) and/or of an Internet
   telephone (18;21) is provided with desktop control
   and status-display functions, as well as
   call-related data in the dynamic interfaces of a Web
   browser, the functional scope of the functions and
   data to be provided and the application interface
   being defined by at least one Web document which is
   stored on a Web server (15).

2. The circuit arrangement as recited in Claim 1,
   wherein the Internet telephone (18) is assigned to
   the EDP-System (8).

3. The circuit arrangement as recited in Claim 1,
   wherein the Internet telephone (21) is assigned to
   the LAN (5).

4. The circuit arrangement as recited in Claim 1,
   wherein to provide a server-based control and status
   display, and to make available call-related data at
   the LAN (5), a server is connected, which is
   designed as an Internet-telephone manager (20), over

which the Internet telephones (21;18) connected to the LAN (5), as well as those connected to the EDP system (8), are controlled.

5.   The circuit arrangement as recited in Claim 1, wherein for call processing, a gateway element (19) is connected via a trunk circuit to the LAN (5), the gateway element (19) being an integral component of the TK system (2) and/or being linked via telephone lines to the TK system (2).

6.   The circuit arrangement as recited in Claim 1, wherein a connection element (16), which makes it possible for the user to communicate via the Internet (17) with subscribers outside of the LAN (5), is located at the LAN (5).

Abstract

A circuit arrangement for providing desktop
functionalities for telecommunications terminals used in
computer-aided telecommunications. The object of the
present invention is to provide both the users of
system-bound telecommunications terminals, e.g. telephone
(1), as well as the users of Internet telephones (18;21),
with flexible desktop functionalities. The approach of
the present invention is based on a basic circuit,
composed of an intelligent TKA (2), which has a
connection to the public telephone network (3) and which
is linked to an integration element (7). An EDP system
(8) is connected via a LAN (5) to the integration element
(7). To fulfill the technical objective, a Web server
(15) is connected to the LAN (5). In accordance with one
practical embodiment of the present invention, a gateway
element (19), which is preferably integrated in the
intelligent TKA (2), is additionally connected to the LAN
(5). The gateway element (19) is used, in particular, for
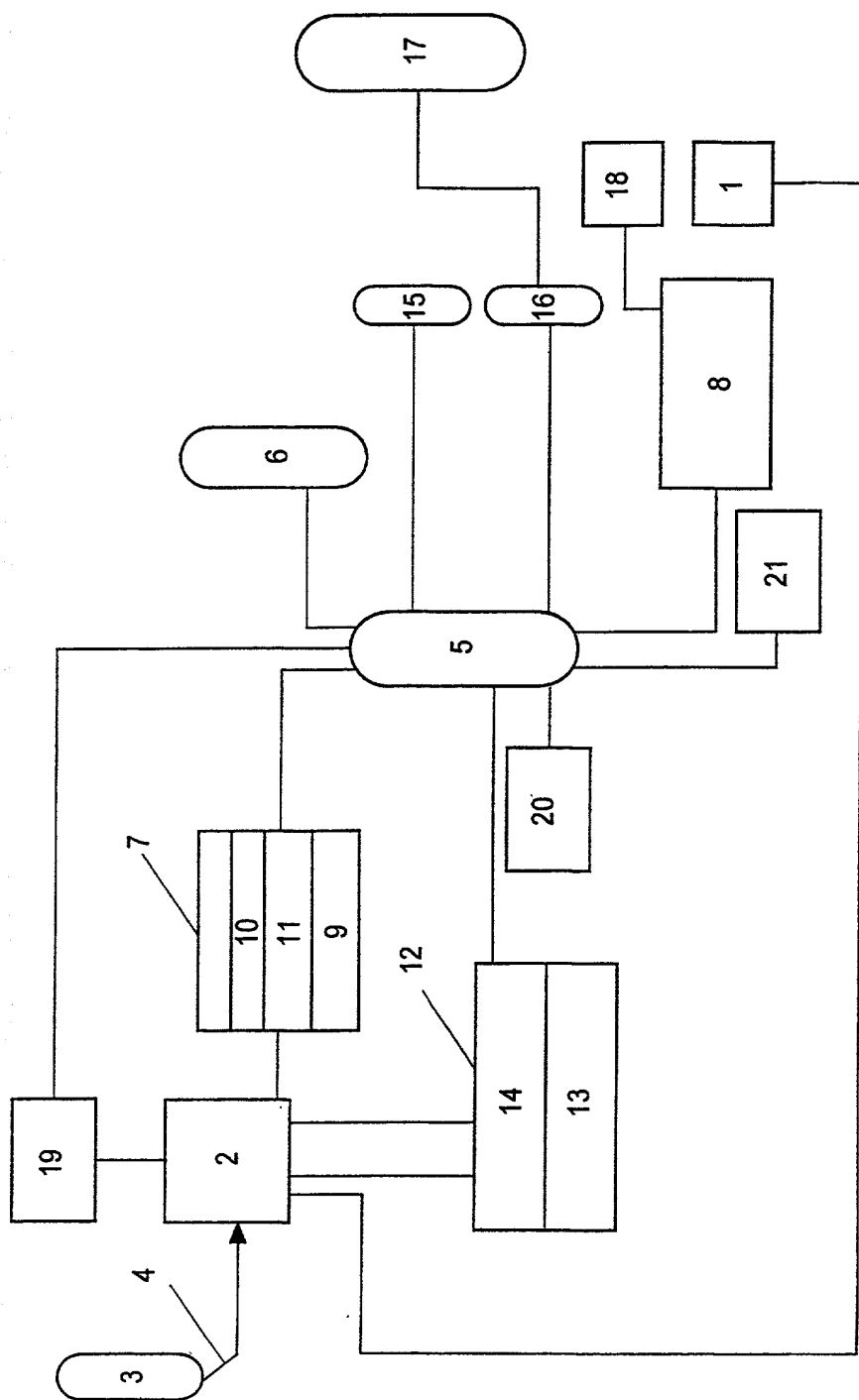coupling different networks (gateway). Figure 1

Fig.

[2345/171]

CIRCUIT ARRANGEMENT FOR PROVIDING DESKTOP FUNCTIONALITIES
FOR TELECOMMUNICATIONS TERMINALS USED IN
COMPUTER-AIDED TELECOMMUNICATIONS

FIELD OF THE INVENTION

The present invention is directed to a circuit
arrangement for providing desktop functionalities for
telecommunications terminals used in computer-aided

5   telecommunications. Telecommunications terminals may
include, for example, both telephones at private
telecommunications systems, as well as internet
telephones.

10   BACKGROUND INFORMATION

The reference German Patent DE 195 08 076 C2 purportedly
concerns a circuit arrangement for integrating a voice
system in electronic data processing (EDP) systems and
telephone systems which is linked to the public telephone

15   network. A basis for this approach may be that the EDP
systems and the voice system are linked via a local area
network (LAN), with the involvement a local area network
server, and via an integration element, to an intelligent
telecommunications system (TK system or TKA). In this

20   context, the integration element 7, which includes a
computer system 9, a software layer 10 and a synchronous
data link control (SDLC) or integrated services digital
network (ISDN), respectively Euro-ISDN connection element
11, is configured between the intelligent

25   telecommunications system 2 and the EDP System 8. The
voice system includes a voice medium 12 having a speech
memory 13 and a speech management 14, which is assigned
in controllable fashion by the integration element 7,
with the involvement of the LAN 5 and a file server 6, to

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the intelligent TKA 2 or to a plurality of intelligent telecommunications systems. The intelligent TKA 2 directs calls, as needed, to the voice medium 12, the speech management 14 identifying a caller via the LAN 5 or, itself, obtaining the caller-specific identification data using the speech of the speech memory 13, in that, at the same time, the integration element 7 transfers information, such as the caller's ultimate destination and the busy condition of the ultimate destination to the speech management 14, so as to make available, from the speech memory 13, the speech necessary for communication with the caller.

To make computer telephone integration (CTI) functions available to an operator/user at his or her electronic data processing (EDP) system 8, in accordance with the above described approach, one must either install a special CTI application software, such as CSB-ETB (firm CSB System AG, www.csb.de) on the EDP system 8, or use universal communications applications, such as MS Outlook, which then need to be upgraded to include the desired CTI functionality (Office EDITION, firm Dr. Materna GmbH, www.materna.de). The result, therefore, for all affected users/clients in the local network is an increased outlay for software installation and maintenance services. A further drawback associated with the required special application approaches is that they are usually equipped with their own address databases, as well as activity journals, making it necessary for the user to access different data files for the various forms of communication. In addition, control and status-display functions of telephones, which are linked to intelligent telecommunications systems, are provided by the EDP system 8, using separate application software, e.g.,

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CSB-ETB (firm CSB System AG, www.esb.de). For Internet telephone functions, a separate software is likewise used, such as the Internet phone (firm VocalTec Communications). This may further increase the outlay for
5 software installation and maintenance services for all users/clients in the local network. In addition, the user is confronted with different operational structures, interfaces or environments. Additional software is also required, in turn, for the synchronization of available
10 telecommunications and internet telephony.

To make desktop functionalities available to a user for his or her telecommunications terminals, one must either create new applications programs or expand existing
15 programs to include these functions. Thus, this entails an increased outlay for software installation and maintenance services for all users in the network. Further, some desktop software approaches do not permit any administration by the user.
20
The reference WO 98/49809A purportedly concerns a switch-free, automatic call distribution system (ACD) which is used to distribute incoming calls to call agents, which are networked via an economically priced data network,
25 such as an Ethernet. Normal calls from the available telephone network service (POTS) come in from the public telephone network (PSTN), whereupon a POTS/packet gateway digitizes the signal and compresses it. The POTS/packet gateway then converts the signal into a packeted format.
30 In reaction to a call distribution algorithm, the caller's packeted voice signals are distributed via the Ethernet to the agent. At the same time, documents are generated which contain database information pertaining to the caller. These documents are distributed to the

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agents via the Ethernet.

SUMMARY OF THE INVENTION

The present invention is directed to eliminating the
5   switching exchange device which belongs to available
automatic call distribution.

In the reference, A. Catchpole, "Voice-Data Convergence
and the Corporate Voice-Over-IP Trial", British
10   Telecommunications Engineering, GB, British
Telecommunications Engineering, London, vol. 17, no. 4,
January 1999 (1999-01), pages 218-224, XP000801951 ISSN:
0262-401X, a Voice-Over-IP (VoIP) system is purportedly
reproduced in Figure 3, where IP telephones are directly
15   linked to a LAN.

The present invention is directed to providing both the
users of system-bound, or system dependent,
telecommunications terminals, as well as the users of
20   Internet telephones, with flexible desktop
functionalities, and thus, may minimize the outlay
entailed by the operator/user to install and maintain the
software required for desktop functions.

25   ## BRIEF DESCRIPTION OF THE DRAWING
The Figure shows an exemplary embodiment circuit
according to the present invention.

DETAILED DESCRIPTION
30   The Figure, purportedly related to a basic circuit
discussed in the reference German Patent No. 195 08 076,
is composed of an intelligent telecommunications system
(TKA) 2, which has a connection to public telephone
network 3 and which is linked to an integration element

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7, composed of a computer system 9, a software layer 10, and a connection element 11.

Integration element 7 is connected to a LAN 5. An EDP
system 8 is connected to LAN 5. Integration element 7 may
be linked both via LAN 5, as well as directly via the
SDLC- or ISDN-, i.e., Euro-ISDN connection element, or
also via other suitable data interfaces to intelligent
telecommunications system 2. For telecommunications
terminals, e.g., telephones, which are allocated either
in cabled (or line-conducted) or wireless (or cordless)
fashion to a telecommunications system, e.g., an
intelligent telecommunications system 2 and telephone 1,
a web server 15 may be connected to LAN 5 to make
available control and status-display CTI functions, as
well as call-related data. The CTI control and
status-display functions of telecommunications terminals,
as well as elements for displaying and inputting
call-related data, may be made available to the user, via
web server 15, in dynamic interfaces or dynamic graphical
user interfaces of a Web browser. Call-related data may
be understood to be both general information pertaining
to the particular call, such as call numbers or clock
times, as well as special information on the people
involved, their relationships to one another, and other
information, which is to be correlated with the call
content. This information may be loaded, as needed, from
various data files and/or databases.

The functional scope and the application interface for
the CTI functions to be made available to the user, as
well as the call-related data, may be defined by one or a
plurality of web document(s) stored on web server 15.
Following each process of loading the web document(s)

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provided by web server 15, each user may always receive the latest version.

The layout of the interface is automatically adapted to the status, e.g., of telecommunications terminal 1. This means that the information presented to the user and the functions made available to him or her are exclusively those required for the action he or she initiated, i.e., those which are, in fact, useful for the initiated action.

Data such as addresses or activity journal entries from other communications software modules may be read over appropriate interfaces, displayed, and written in there, without the user having to modify his or her corresponding application software.

If a user has an internet telephone, located, for example, at LAN 5 or EDP system 8, then the control and status-display functions, as well the call-related data, may be made available via web server 15, for the internet telephone 18 or 21, in dynamic interfaces of a web browser.

For the system-bound telecommunications terminals 1, as well as for internet telephones 18 or 21, the functional scope and the application interface may be defined by one or a plurality of web document(s) stored on the web server 15. During every loading process, each user may always receive the latest version of the Web document.

The layout of the interface may be configured such that it is always automatically adapted to the status of the particular telephone 1 of intelligent TKA 2 and/or to the

status of the particular Internet telephone 18 or 21. This means that the information presented to the user and the functions made available to him or her may be exclusively those required or, in fact, useful for the particular action.

Data, such as addresses or activity journal entries from other communications software modules may be read over appropriate interfaces, displayed, and written in there, without the need for modifying the corresponding application software. When a user logs onto the network, a user authentication may be expediently carried out, in conjunction with the granting of use rights, before a document is loaded for the first time from web server 15. This can be done either by way of, for example, a password query or through a smart card belonging to the user.

A further embodiment of the present invention provides for configuring a server as an internet-telephone manager 20 at LAN 5. Internet-telephone manager 20 controls the internet telephones which are connected to LAN 5 or via EDP system 8, such as internet telephones 21 and 18, and communicates with EDP system 8. This renders possible a server-based control and status display and/or provision of call-related data.

An internet connection element (16) is provided at LAN (5) for internet telephones 18 and 21. Using Internet connection element 16, it is possible to communicate via internet (17) with subscribers outside of LAN (5) and to enable an internet access for at least one telecommunications terminal of the user. When system-bound telecommunications terminals are involved,

such as telephone 1, remote access from various EDP
systems, both at LAN 5, as well as over the entire world,
may be made possible over an internet connection via
connection element 16.

In the process, the statuses and functions of
conventional or available system-bound telephones 1,
which are connected, for example, to intelligent
telecommunication system(s) 2, and those of an internet
telephone 18 or 21, may be coordinated with one another,
depending on the requirements of the user. For example,
functions such as call forwarding, call parking,
brokering (or alternating between two lines), call
transfer, and teleconferencing may be synchronized and,
moreover, also be utilized as directional functions.
Thus, if telephone 1 or Internet telephone 18 or 21 is
busy, incoming calls at the respective, other
telecommunications terminal may be directed to new
destinations in accordance with rules established by the
user.

Alternatively or in conjunction with that above, an
embodiment based on the use of a gateway element (or
network interworking facility) 19, which is an integral
component of telecommunication system 2, i.e., is
connected via telephone lines to telecommunication system
2. Gateway element 19 is linked via another trunk circuit
(or connecting line) to LAN 5. The use of a gateway
element 19 for coupling different networks (gateway)
opens up to the user the possibility of communicating
over one single telecommunications terminal, by making
proper routing adjustments and, in case of need, e.g., in
telephone conferences, of interconnecting calls over
various line types.

With respect to the system configuration, there are different design variants. Depending on the user's specific requirements, one may, in some instances, do without a file server 6. Moreover, the functions of file

5   server 6, of integration element 7, of voice medium 12, of internet connection element 16, as well as of gateway element 19, may be integrated in one single module or be distributed in different useful components among a plurality of modules, depending on the requirements and

10   the handling capacity of these components.

ABSTRACT

A circuit arrangement for providing desktop
functionalities for telecommunications terminals used in
computer-aided telecommunications. Both the users of
system-bound telecommunications terminal, e.g.,
telephones, as well as the users of internet telephones,
may be provided with flexible desktop functionalities,
based on a basic circuit, composed of an intelligent
telecommunications system which may have a connection to
the public telephone network and which may be linked to
an integration element. An electronic data processing
system may be connected via a local area network to the
integration element. A web server may be connected to the
local area network. Further, a gateway element, which may
be integrated in the intelligent telecommunications
system, may additionally be connected to the local area
network. The gateway element may be used for coupling
different networks (gateway).

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DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **CIRCUIT ARRANGEMENT FOR PROVIDING DESKTOP FUNCTIONALITIES FOR TELECOMMUNICATIONS TERMINALS USED IN COMPUTER-AIDED TELECOMMUNICATIONS**, the specification of which was filed as International Application No. PCT/EP00/04523 on May 19, 2000 and filed as a U.S. application having Serial No. 10/018,152 on December 14, 2001 for Letters Patent in the U.S.P.T.O.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

PRIOR FOREIGN APPLICATION(S)

Number	Country Filed	Day/Month/Year	Priority Claimed Under 35 USC 119
199 28070.3	Fed. Rep. of Germany	June 14, 1999	Yes

And I hereby appoint Richard L. Mayer (Reg. No. 22,490), Gerard A. Messina (Reg. No. 35,952) and Linda M. Shudy (Reg. No. 47,084) my attorneys with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful and false statements may jeopardize the validity of the application or any patent issued thereon.

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